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TRUMBULL

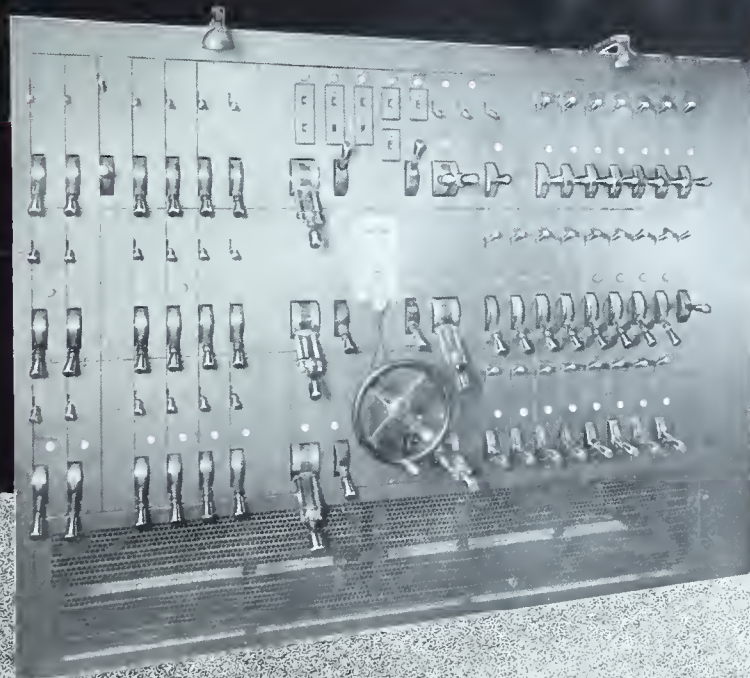


TRADE

MARK

**"CONTROLITE"**

*The*  
THEATRE CONTROL BOARD



**THE TRUMBULL ELECTRIC MFG. CO., Plainville, Conn.**

NEW YORK

BOSTON

PHILADELPHIA

CINCINNATI

CHICAGO

ATLANTA, GA.

JACKSONVILLE, FLA.

SAN FRANCISCO



# Trumbull "Controlite"

## A Combined Switchboard and Dimmer Bank

Recent years have seen a wonderful development in auditorium and stage illumination. Theatre owners and managers have found refined lighting effects indispensable to every type of performance. The finest layout of illumination is, however, entirely ineffective unless proper control is provided.

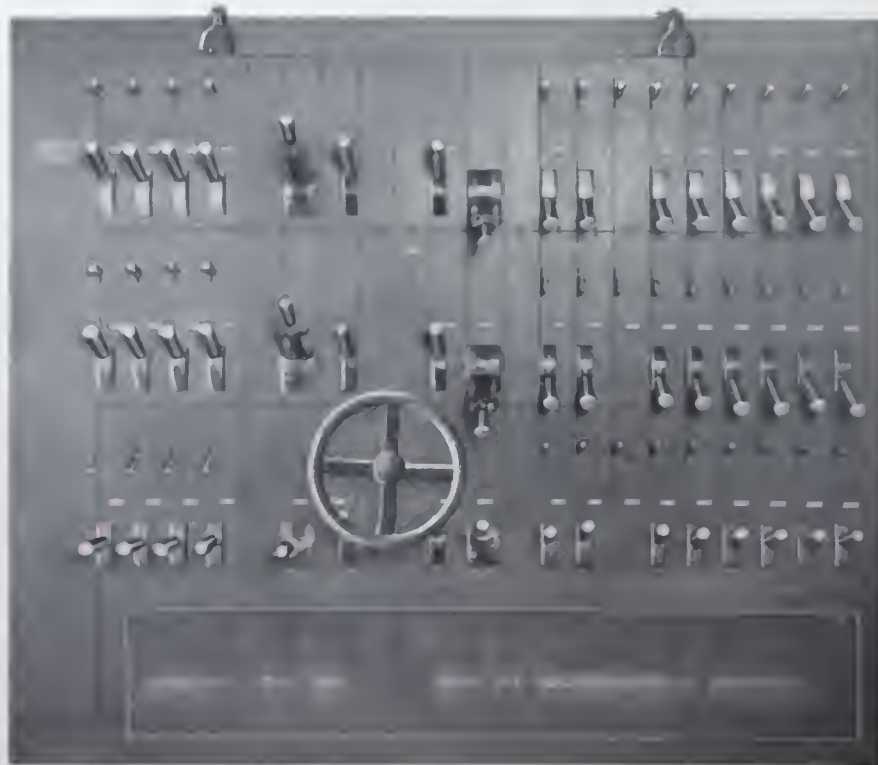
The Trumbull Electric Mfg. Co. presents "Controlite" as a means of providing ideal light control for practically every theatre.

Proper control is largely a matter of convenient operation of dimmers.

The lighting effects which sway audiences are not obtained by the flashing on or off of lights, but rather by a slow, harmonious blending of colors. In other words, effective light control is obtained by dimmer operation rather than by switching.

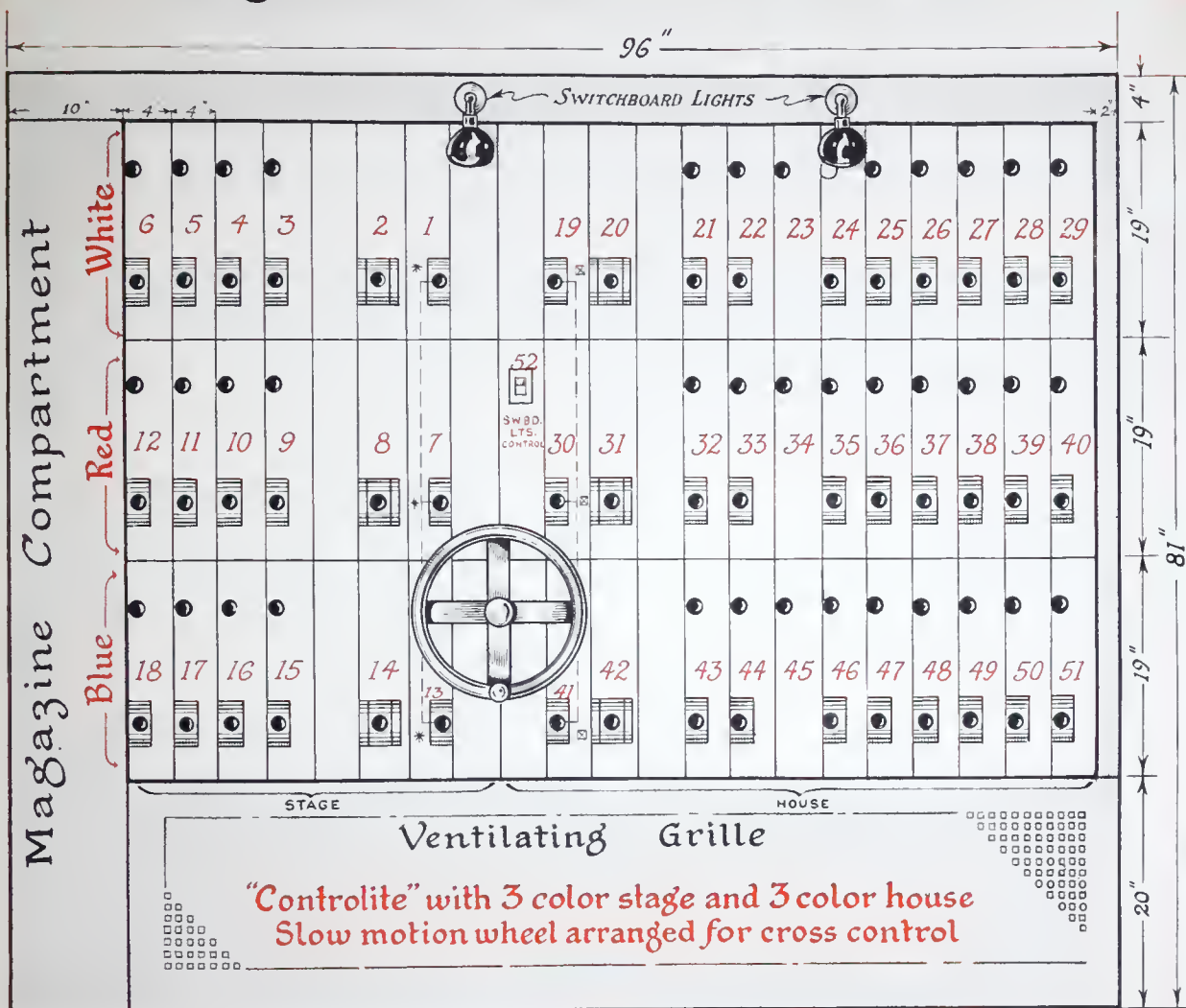
How little attention has been given this feature in the past is shown by the fact that in many fine theatres stage electricians are compelled to stand on stools or steps in order to reach the dimmer handles controlling certain effects.

A glance at "Controlite" will show that every handle is within the easy reach of one operator. He can produce each effect instantly and without effort.



"Controlite" installed in Kensington Theatre, Buffalo, N. Y.

# Diagram of Trumbull "Controlite"



"Controlite" with 3 color stage and 3 color house  
Slow motion wheel arranged for cross control

## Schedule for Kensington Theatre, Buffalo

No.	Name	Color	Wts.	No. Br.
1	Stage Master Sw. 60A-3P- Knife Sw.	White		
2	Stage Master Lever	"		
3	Foots	"	3000	2
4	Border No. 1	"	2100	2
5	Prosc. Strips	"	1200	2
6	Inc. Pocket	"	1000	1
7	Stage Master Sw. 60A-3P- Knife Sw.	Red		
8	Stage Master Lever	"		
9	Foots	"	3000	2
10	Border No. 1	"	2100	2
11	Prosc. Strips	"	1200	2
12	Inc. Pocket	"	1000	1
13	Stage Master Sw. 60A-3P- Knife Sw.	Blue		
14	Stage Master Lever	"		
15	Foots	"	3000	2
16	Border No. 1	"	2100	2
17	Prosc. Strips	"	1200	2
18	Inc. Pocket	"	1000	1
19	House Master Sw. 100A-3P- Knife Sw.	White		
20	House Master Lever	"		
21	Recesses of Boxes	"	1000	1
22	Prosc. Arch-Coves	"	3000	2
23	R. L. and R. Coves	"	3000	2
24	R. L. and R. Coves	"	3000	2
25	1 Handle for No. 23 and 24 Dimmers	"		
26	Dome Panel A.	"	2000	2
27	" " B.	"	2000	2
28	" " C.	"	2000	2
29	" " D.	"	1000	1
30	" " E.	"	1000	1
31	House Master Sw. 100A-3P- Knife Sw.	Red		
32	House Master Lever	"		
33	Recesses of Boxes	"	1000	1
34	Prosc. Arch Coves	"	3000	2
35	R. L. and R. Coves	"	3000	2
36	Dome Panel A.	"	2000	2
37	" " B.	"	2000	2
38	" " C.	"	2000	2
39	" " D.	"	1000	1
40	" " E.	"	1000	1
41	House Master Sw. 100A-3P- Knife Sw.	Blue		
42	House Master Lever	"		
43	Recesses of Boxes	"	1000	1
44	Prosc. Arch. Coves	"	3000	2
45	R. L. and R. Coves	"	3000	2
46	R. L. and R. Coves	"	3000	2
47	1 Handle for No. 45 and 46 Dimmers	"		
48	Dome Panel A.	"	2000	2
49	" " B.	"	2000	2
50	" " C.	"	2000	2
51	" " D.	"	1000	1
52	" " E.	"	1000	1
52	Switchboard Lights S. P. Tumbler Sw.			

Interlocking Stage and House Master Switches for Grand Master Operation.



## Simplicity of Control

The illustrations of "Controlite" in this Bulletin clearly show the arrangement of dimmers. Each color is in a single horizontal row. Each location (foots, borders, etc.) is in one or more vertical rows. This arrangement, supplemented by colored indicators, allows the operator to identify the circuits instantly, also to observe the degree of dimming.

Above each dimmer handle is located the corresponding circuit switch, by which the lights may be "Flashed" on or off when necessity demands. As this switch is adjacent to the dimmer handle, there is no possibility of confusion.

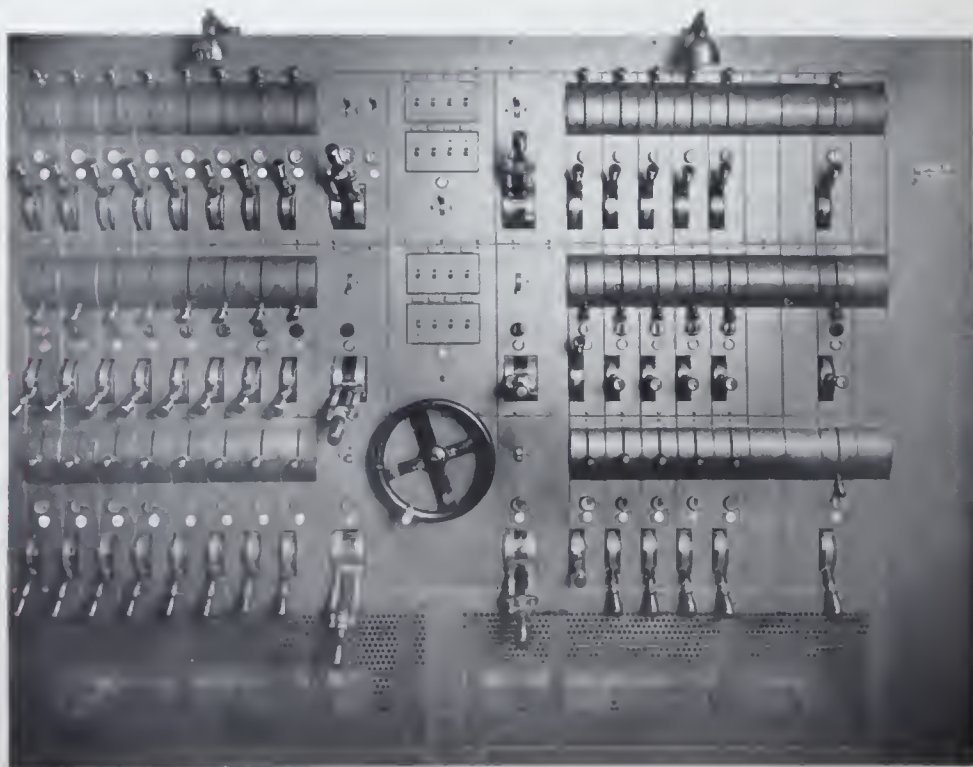
At the inner end of each color row is located the color master dimmer handle. At its side is the master switch handle. Stage and house grand master levers are furnished as desired. All master controls are conveniently located at center of board, occupying a minimum of space.

Many fine lighting effects are obtained by the use of a slow motion hand wheel with cross control mechanism. By this means, certain circuits can be gradually brightened while others are simultaneously dimmed. Independent circuits and switches may be located and controlled as desired.

## Advance Set-up of Lights

Great flexibility of control is provided by the use of interlocking dimmers. Circuits not in use may be set up in advance by closing the manually operated switches with dimmers in the "off" position. When needed, the corresponding dimmers can be brought to the "Bright" position by operating the master lever with which they are interlocked.

If a greater degree of advance set-up is desired, it may be obtained by the use of remotely controlled Master Switches. A transfer switch is provided for each circuit, so that it may be brought under control of the master switch, or not, as desired. The remote switches are controlled by pilots suitably located on the "Controlite."



"Controlite" with advance set-up.  
Installed by Saxe Amusement Enterprises, Oshkosh, Wis.

## Flipper Switch operated by Dimmer Handle

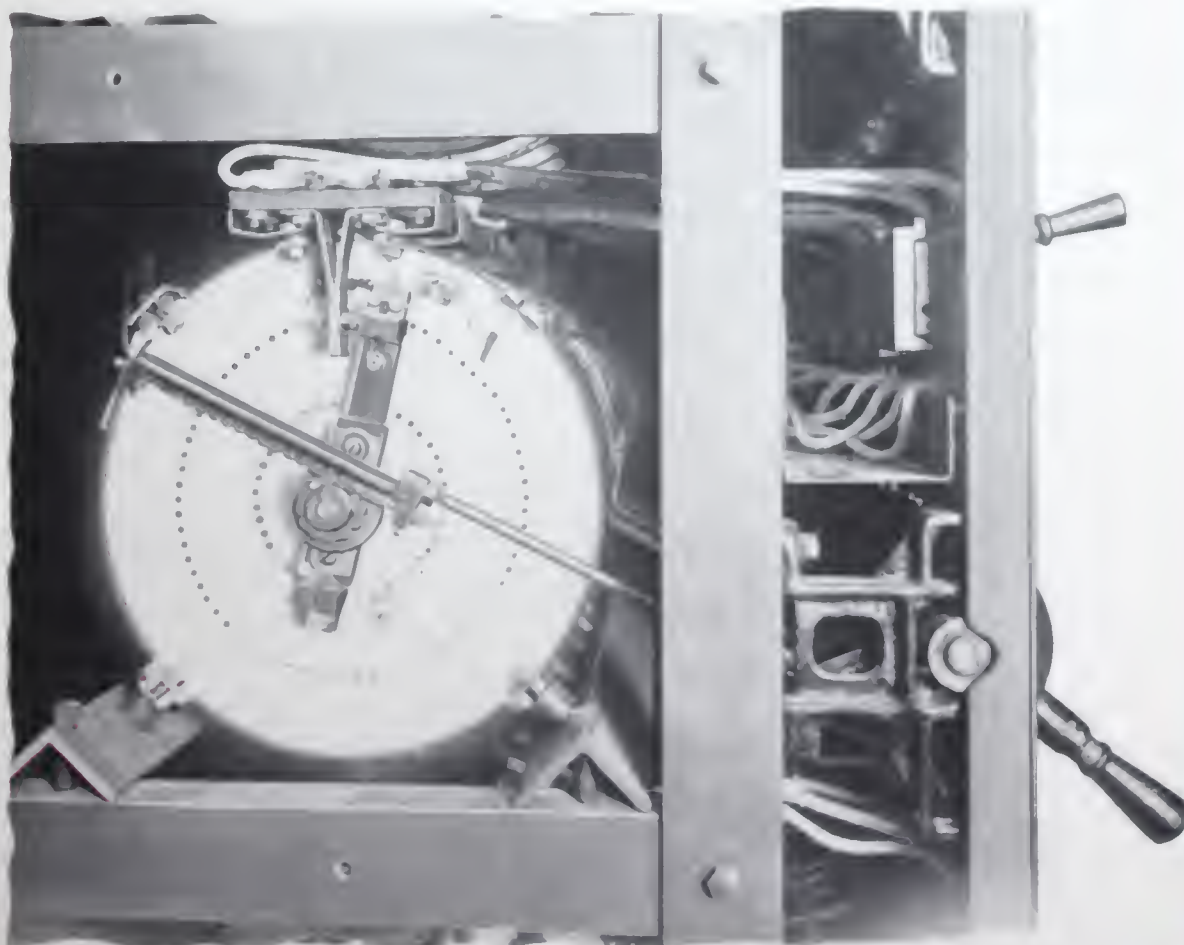
"Controlite" combines the functions of a theatre dimmer bank and its auxiliary switchboard, thus providing a unit of light control complete in itself.

Standard construction provides on each dimmer plate a switch which automatically opens the circuit when the "Black Out" position is reached, thereby making it unnecessary to use the circuit switch except for sudden flashing on or off. This *flipper switch* on the dimmer plate avoids the waste of current which would otherwise result if circuit switches were left closed after "Black Out" had been reached.

This switch also avoids the possibility of faint but objectionable illumination when dimmers not loaded to their rated wattage are in the extreme position.

Practice has proved that with "Controlite" the operator works almost entirely with his most effective agents — the dimmers — and "Controlite" is the only theatre control board which permits him to do so.

The importance of convenient dimmer operation is apparent. There is little to be gained by advance switch "Set-Up" if this same advance "Set-Up" cannot be obtained on the dimmers.



Cross section of "Controlite" showing flipper switch operated by dimmer handle.  
Strong framework mounting of dimmer plates and details such as coil spring stop, clearly illustrated.  
Note circuit switch above dimmer handle, also wiring trough



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## Unit Construction

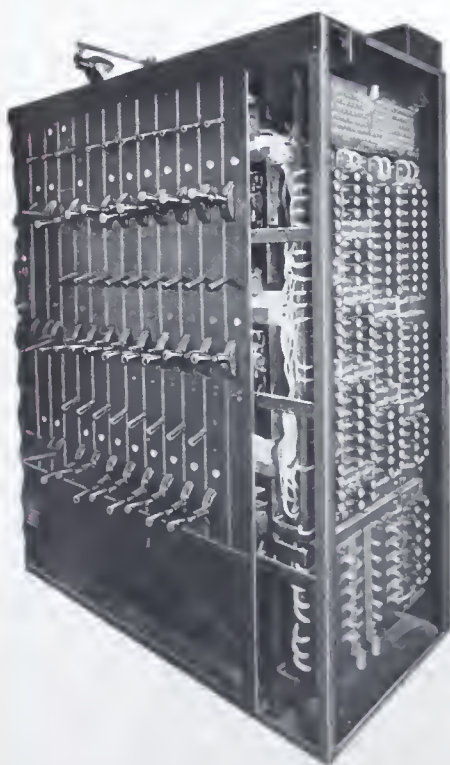
"Controlite" is of all metal fireproof construction. Dimmer plates are bolted to a strong angle iron frame, well braced. They are located directly back of their respective handles and are thus controlled by the shortest and most positive drive. For this reason operation is very easy.

Unit construction is used. Single dimmer plates from 250 to 3000 watts occupy the same space. If changes in load are made at any time, it is possible to interchange the plates readily.

Circuit wires are carried by metal troughs to the magazine panel, built in to the end of the board. The whole is enclosed by steel plates. No live parts or unsightly mechanisms are exposed, so that the appearance is very pleasing, particularly so because the enclosure is handsomely finished in black. When desired, other colors, such as gray can be furnished.

### **"Controlite", Capitol Theatre, Worcester, Mass.**

*Three Color stage at left. Three Color house at right. Color Master Levers with Slow Motion Wheel arranged for Cross Control. Also interlocking Color master knife switches.*



Magazine compartment with doors and sides removed for connection of load wires and mains.

Note: Metal troughs carrying circuit wires, strong framework and unit construction.



"Controlite" wired and ready for shipment. Note: Adjustable lights at the top for illumination, also special pull box for conduit at top extending across back.

## Easy to Install

*Illustrations on this and opposite page show Trumbull "Controlites" wired and ready for shipment.*

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# Uptown Theatre, Indianapolis, Ind.



Front view: 3 color stage at left. 3 color house at right. Plain color master control, also interlocking color master knife switches.



Rear view: Showing color master knife switches and dimmer plates. Note accessibility.

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# Roxbury High School, Boston, Mass.



Front view: 1 color house at left. 3 color stage at right. Plain color master control with grand master lever, also master knife switch.



End view: Showing magazine compartment with doors open. Neutral bar at top, group and circuit fuses middle, master switch fuses at bottom.

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## Shipped as a Complete Unit

"Controlite" is shipped as a complete unit with dimmers, switches and magazine panels all built and wired together.

Installation is, therefore, merely a matter of connecting line and load conduits and wires to the magazine compartment, whose sides, top and bottom are removable to make this easy. (See page 6.)

This is in contrast to the situation existing when dimmers, switchboard and magazine panels are made by different manufacturers and arrive at different times from different points, and then without assurance that they will fit together. Even should they fit, the result has none of the real features of "Controlite."

For these reasons, the cost of installing "Controlite" is decidedly less than with other classes of equipment.

The advantages of dealing with one concern only in the manufacture of this material are evident. "Controlite" occupies less space than other designs for a similar purpose.

## Most Economical Light Control

Comparisons of cost should be made only when performance is considered as well.

With the superior control afforded by "Controlite" there seems little reason for purchasing the old style of board.

"Controlite" is far less expensive than are remote control boards. Elaborate arrangements for setting up switches in advance are not particularly useful when the dimmers cannot be set up correspondingly. To pre-set dimmers would prove so expensive that boards of this type are not being manufactured. On the basis of performance and cost, therefore, "Controlite" is the most economical control board in existence.

It is most important not to lose sight of the fact that a theatre owner or lessee is not buying so many dollars of dimmers and switching equipment, but is buying the lighting effects that the average operator will obtain from this material.

Even though Trumbull "Controlite" installed costs no more than the equivalent in the old-style switchboard with its dimmer bank mounted on top, and magazine panels, cabinet and connecting troughs, the arrangement and assembly are such that "Controlite" provides far more and far better control of lights without any appreciable increase in cost.

Trumbull "Controlite," therefore, is the Theatre Control Board providing the most per dollar expenditure in *light control*.

## Experience in Manufacture

In Trumbull "Controlite" Ward Leonard *continuous duty* Vitrohm dimmers are used exclusively.

The Trumbull Electric Manufacturing Company and the Ward Leonard Electric Company have been manufacturing switches and dimmer plates, respectively, for more than a quarter of a century.

"Controlite," the simplest theatre control board, is the product of over twenty-five years' manufacturing experience.





**Interior View of the  
State Theatre, Hartford, Conn.**  
Seating capacity 4000 main floor, 300 balcony

Proscenium opening 75 feet wide x 30 feet high.

Stage and house lighted in three colors.

Stage has foots, 5 borders including valance,  
proscenium and curtain strips.

House has main dome, organ coves, proscenium  
coves, organ and main crystal chandeliers,  
recess panels under balcony.

"Controlite" the combined switch board and dimmer bank with which the lighting effects in this theatre are obtained is shown at the left.



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## Suggested Specifications for Trumbull Controlite

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1. For the control of the stage and auditorium lighting, there shall be installed in the location shown on the plans, a combination dimmer bank and switchboard known as Trumbull "Controlite," manufactured by The Trumbull Electric Mfg. Co., of Plainville, Conn. The number, capacity and arrangement of circuits are given in the attached schedule (see page 3).

2. Unit construction shall be provided so that each dimmer plate and its switch occupies an equal mounting space. The maximum capacity of each dimmer plate shall be 3000 watts.

Dimmer plates shall not be wired in parallel. It is permissible, however, to operate any group of plates by means of a single interlocking handle where specified.

3. Each individual dimmer plate shall be provided with a switch known as the *flipper switch*. This switch, operated by the same handle as the dimmer, must always open the circuit when all the resistance is inserted. This permits operation of the control board by dimmer handles only.

The flipper switch shall be quick-make and quick-break type.

4. The dimmers shall be of the interlocking type and with their controlling mechanism be mounted back of a steel dead-front through which the handles project. Dimmer handles shall be so designed that in any position they will fill the slot through which they project.

Each handle shall be provided with a numbered indicator so that the dimmers can be definitely set for any desired intensity of illumination. This indicator shall be colored to designate the color of the circuit controlled.

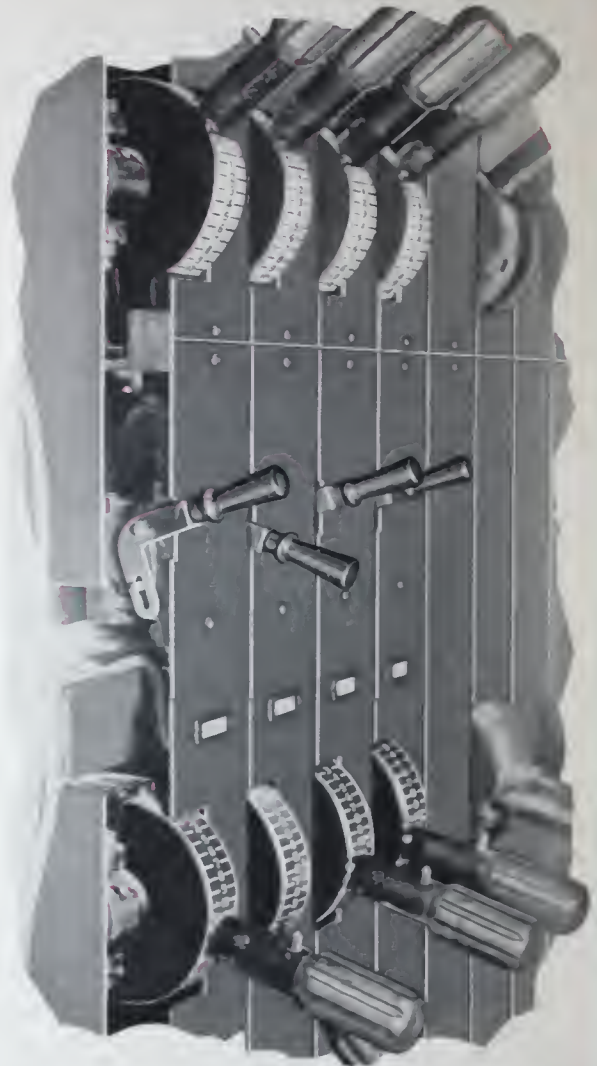
No dimmer handle shall be more than 6 ft. or less than 1 ft. from the floor. (This is required by the safety code of certain States.)

The dimmers shall be the Vitrolm type as manufactured by the Ward Leonard Elec. Co., of Mount Vernon, N. Y., suitable for *continuous* operation at their rated load. They shall conform to the latest specifications of the National Electric Manufacturers' Association for resistor plates.

A coil spring stop shall be provided for the contact arm to secure quiet operation of the dimmers.

*For additional features see next page.*

5. For each dimmer plate a *circuit switch* shall be provided in addition to the flipper switch furnished with the plate. This switch shall be mounted in back of the dead front steel plate and directly above its corresponding dimmer plate, with handle projecting through a slot in the face of the board. The switch shall operate easily and without noise, the handle traveling through an arc of only 35



Section showing interlocking dimmer handles with indicators, also circuit switches.

degrees from full on to full off. The capacity shall be 30 amp. and blades shall be of the self-aligning type, entering arc snuffing slots when the switch is opened.

6. Each circuit to be connected to the Theatre Control Board is known as a *branch circuit*. One or more branch circuits may be connected to any one dimmer plate. Each dimmer plate in units of 3000 watts or less with its flipper switch and the corresponding circuit switch, is protected by a fuse known as the group fuse. Group fuses are not to exceed 30 amperes.

All of the group fuses and circuit fuses are to be of the plug type and conveniently arranged and clearly marked on magazine panels assembled at either end of the Theatre Control Board, the fuses

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of these magazine panels to be accessible through steel doors, provided with spring hinges and three-way vault handles with locks.

Fuse protection shall also be provided in these magazine panels for the various color master mains, arc pockets, independent circuits, etc.

All switches and dimmers shall be wired by the manufacturer with asbestos covered wire; wires shall be carried through suitable steel wiring troughs to the magazine panels. Suitable rear and side wiring gutters shall be provided in the magazine compartment.

A card holder shall be furnished for each switch and for each magazine fuse.

7. Illumination of the control board shall be provided by properly shaded lights of neat appearance mounted at the top.

Any saving in cost made by the substitution of apparatus claimed to be the equal of that mentioned in this specification shall be for the benefit of the owner.

## **Additional Features**

### ***4-a—For Separate Color Masters Stage and House***

*(Add after Paragraph 4)*

Controls for stage circuits shall be arranged on end adjacent to procenium, house circuit controls at the opposite end, separate color master levers for stage and house sections to be provided near the middle.

### ***4-b—For Grand Master Control***

*(Add after Paragraph 4-a)*

There shall also be provided a grand master handle so arranged that one or more color groups may be operated at the same time and in the same direction from the grand master handle.

### ***4-c—For Slow Motion Cross Control***

*(Add after Paragraph 4-a with 4-b optional)*

Master levers shall be so arranged that the color sections may be operated individually or interlocked to a hand wheel mechanism, which, driving through a series of gears, will slowly raise the illumination of one or more color groups and at the same time dim one or more other color groups no change in the direction of rotation of the slow motion wheel being necessary.

*(Note: If cross control feature is not desired the following paragraph shall be used in place of above.)*

Master levers shall be so arranged that the color sections may be operated individually or interlocked to a hand wheel mechanism, which driving through a series of gears, will slowly raise or lower the illumination of one or more color groups, depending upon the direction of rotation of the slow motion wheel."

### ***4-d—For Dead Front Knife Switch Masters***

*(Add after Paragraphs 4 to 4-c inclusive)*

Adjacent to each color master dimmer handle there shall

be a handle controlling a color master knife switch located in back of the protecting steel panel. One switch shall be provided for each color on the stage, one for each color on the house, one for the incandescent pockets and one for the arc pockets.

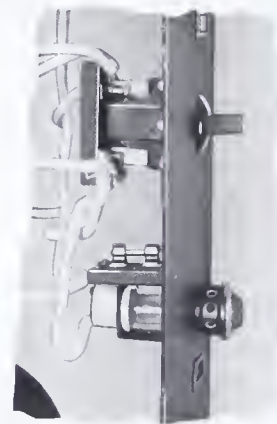
Proper fuse protection shall be provided in the magazine panel and all connections made between these color master switches and the mains.

The color master switches for the stage shall be so arranged that they may be interlocked together and operated as a unit, and those for the house shall be so arranged that they may be interlocked together and operated as a unit, thus providing grand master switch control for stage and for house.

### ***4-e—For Remote Control Color Master Switches***

*(Omit Paragraph 4-d and use the following)*

There shall be provided for each color group on the stage and for each color group in the house, and also for the incandescent pocket group and for the arc-pocket group remote controlled master switches. These remote-controlled master switches shall have suitable pilot-control switches mounted adjacent to the master-control handles on the face of the control board and so arranged that these master switches can be controlled independently and also so that one or more of them can be controlled from a grand-master pilot switch.



Section showing pilot switch and indicating lamp

Above each pilot switch shall be provided a pilot lamp individually fused with lense of appropriate color.

These remote controlled switches, with individual fuses for each switch, shall be mounted on a switchboard located in a separate room where shown on plans.

### ***5-a—For One Step Preset***

*(Omit Paragraph 5 and use the following)*

There shall be provided for each color group on the stage and for each color group in the house two busses. One of these busses shall be continually alive, the other shall be controlled by a master switch. For each dimmer plate, mounted directly above each dimmer handle, there shall be provided a single pole, double throw *transfer* switch, with handle protruding through a slot in the face plate, stop being provided for the open position.

In the up position this switch shall connect the circuit to the live bus, in the down position, to the master controlled bus. By this means the operator may "Set up" on the latter bus, the circuits which he desires to add or subtract for a following scene.

Each switch shall be provided with a pilot lamp, individually fused, with lens of appropriate color which shall indicate the condition of the circuit.

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# TRUMBULL "CONTROLITE"

A COMBINED SWITCHBOARD AND DIMMER BANK

For { THEATRES  
SCHOOLS  
AUDITORIUMS  
LODGE ROOMS } Etc.

The Simplest and Most Economical Light Control



*Approved by The Underwriters Laboratories*